

APPENDIX A

Particle Size Conversion

Sieve Designation		Nominal Sieve Opening		
<i>Standard</i>	<i>Mesh</i>	<i>inches</i>	<i>mm</i>	<i>Microns</i>
25.4 mm	1 in.	1.00	25.4	25400
22.6 mm	7/8 in.	0.875	22.6	22600
19.0 mm	3/4 in.	0.750	19.0	19000
16.0 mm	5/8 in.	0.625	16.0	16000
13.5 mm	0.530 in.	0.530	13.5	13500
12.7 mm	1/2 in.	0.500	12.7	12700
11.2 mm	7/16 in.	0.438	11.2	11200
9.51 mm	3/8 in.	0.375	9.51	9510
8.00 mm	5/16 in.	0.312	8.00	8000
6.73 mm	0.265 in.	0.265	6.73	6730
6.35 mm	1/4 in.	0.250	6.35	6350
5.66mm	No.3 1/2	0.223	5.66	5660
4.76 mm	No. 4	0.187	4.76	4760
4.00 mm	No. 5	0.157	4.00	4000
3.36 mm	No. 6	0.132	3.36	3360
2.83 mm	No. 7	0.111	2.83	2830
2.38 mm	No. 8	0.0937	2.38	2380
2.00 mm	No. 10	0.0787	2.00	2000
1.68 mm	No. 12	0.0661	1.68	1680
1.41 mm	No. 14	0.0555	1.41	1410
1.19 mm	No. 16	0.0469	1.19	1190
1.00 mm	No. 18	0.0394	1.00	1000
841 µm	No. 20	0.0331	0.841	841
707 µm	No. 25	0.0278	0.707	707
595 µm	No. 30	0.0234	0.595	595
500 µm	No. 35	0.0197	0.500	500
420 µm	No. 40	0.0165	0.420	420
354 µm	No. 45	0.0139	0.354	354
297 µm	No. 50	0.0117	0.297	297
250 µm	No. 60	0.0098	0.250	250
210 µm	No. 70	0.0083	0.210	210
177 µm	No. 80	0.0070	0.177	177
149 µm	No. 100	0.0059	0.149	149
125 µm	No. 120	0.0049	0.125	125
105 µm	No. 140	0.0041	0.105	105
88 µm	No. 170	0.0035	0.088	88
74 µm	No. 200	0.0029	0.074	74
63 µm	No. 230	0.0025	0.063	63
53 µm	No. 270	0.0021	0.053	53
44 µm	No. 325	0.0017	0.044	44
37 µm	No. 400	0.0015	0.037	37

Larger sieve openings (1 in. to 1/4 in.) have been designated by a sieve "mesh" size that corresponds to the size of the opening in inches. Smaller sieve "mesh" sizes of 3 1/2 to 400 are

designated by the number of openings per linear inch in the sieve.

The following convention is used to characterize particle size by mesh designation:

- a "+" before the sieve mesh indicates the particles are retained by the sieve;
- a "-" before the sieve mesh indicates the particles pass through the sieve;
- typically 90% or more of the particles will lie within the indicated range.

For example, if the particle size of a material is described as -4 +40 mesh, then 90% or more of the material will pass through a 4-mesh sieve (particles smaller than 4.76 mm) **and** be retained by a 40-mesh sieve (particles larger than 0.420 mm). If a material is described as -40 mesh, then 90% or more of the material will pass through a 40-mesh sieve (particles smaller than 0.420 mm).

This information is also provided on page T848 of the Aldrich 2003-2004 Catalog/Handbook of Fine Chemicals.

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